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EDITORIAL DEPARTMENT NOTE

Business executives generally had hoped that with the cessation of hostilities it would be possible, after a reasonable reconversion period, to begin satisfying the huge demand for goods. Unfortunately, the disturbed labor situation has drawn management's attention to more immediately pressing problems. It is good, however, to be reminded of the important role which cost accounting is destined to play as soon as the labor situation stabilizes itself. Accordingly, Mason Smith presents in our leading article some of the major problems confronting business, points out the factors involved in each and possible avenues of approach to their solution.

Mr. Smith, a certified public accountant in Illinois, graduated from Northwestern University School of Commerce in 1924 and a year later obtained a Master's degree from that institution. His experience includes teaching at Georgia and Ohio State Universities; he was at various times Assistant General Manager of operations of Kroger Grocery and Baking Co., and Director of Personnel of Marshall Field and Co. From 1932 to 1935 he was with James O. McKinsey and is now a Partner in McKinsey, Kearney and Co. He has always been active in N. A. C. A. affairs, having served for two years as Assistant Secretary of the Association, and currently serving as National Vice President.

The construction industry, in the opinion of Roy M. Abagnale, author of the second article, will probably occupy first place in volume of business for some years. He therefore takes us behind the scenes and presents the distinctive features of accounting for the construction industry. His long public accounting experience has afforded him considerable contact with the business of construction contractors. The problems of this business revolve about cost accounting, including distribution of overhead and property accountability.

Mr. Abagnale is a graduate of Columbia University and of Pace Institute, New York City. He is a certified public accountant of New York and Massachusetts, and has had over twenty years of public accounting experience. In addition to his public practice, Mr. Abagnale is currently acting as Management Consultant to Hampden Brass Co., Springfield, and Stevens, Walden, Inc., Worcester, Massachusetts.

Payroll accounting has received a great deal of attention both in industry and in our publications. It is always fascinating to see how ingenuity and common sense can be combined to produce a new solution in the form of a time and labor saving device.

Milton E. Mengel, the author of the third article in the current issue, received his accounting education at the University of Wisconsin and his early accounting training in various firms in the Milwaukee area. Since joining the Burroughs organization over eighteen years ago, he has specialized in machine accounting methods. For the past eight years he has been connected with their home office staff as Director of the Industrial Division. He is a member of the Saginaw Valley Chapter of N. A. C. A.

Articles published in the *Bulletin* present many different viewpoints. In publishing them the Association is not sponsoring the view expressed, but is endeavoring to provide for its members material which will be helpful and stimulating. Constructive comments are welcomed and will be published in the Forum Section of the *Bulletin*.

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NATIONAL ASSOCIATION OF
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JUNE 15, 1946

INDUSTRIAL ACCOUNTING IN A COMPETITIVE ECONOMY

By Mason Smith, Partner,
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THESE are difficult times to attempt to make any contribution in the general field of business or its accounting problems. No sooner does one get his house in order than the rules of the game are changed either by modification or complete reversal, thus making what seemed to be a sound procedure or policy obsolete, or partially so. It is also difficult because many of the ideas which have motivated the activities of many of us in an attempt to gain success in competitive business have been severely tested, amended, revised, and in some cases, discredited during the past few years. Further, it is difficult because we are attempting to discuss a subject which applies primarily to a time which will come at some indefinite date in the future, after the problems of the war have faded into the background leaving their scars as well as their lessons.

It seems worth while therefore, to reorient ourselves, to point out some of the characteristics of the competitive economy that lies ahead of us, and to attempt to gear the industrial accountant's job to the problems which will arise in the minds of American business executives as they operate in this revised competitive atmosphere. It seems best in attempting any contribution in this field, therefore, to sharpen our ideas concerning our concepts of competitive economy as we may find that economy to exist henceforth.

Return of Free Competition?

Prophecy is always dangerous but logical projection of demonstrated trends is frequently useful. It is worth while, therefore, for us to consider some of these trends and to see where this consideration leads us. It is probably redundant to mention that the idea of competitive economy which existed prior to 1930 will never return, at least to the degree that it existed at that time. It seems self-evident that one cannot look forward with any great prospect to a period in the foreseeable future when the individual business or businessman can expect to operate in what we called

an atmosphere of "free competition" again. That atmosphere had many drawbacks. It created many problems, some of the effects of which we find all about us in these troublesome days. I think it is sufficient to settle for the fact that we cannot expect to operate in the future as owners or managers of business with a degree of freedom of action with which we operated up to about fifteen years ago.

Business and Government

The competitive economy of the foreseeable future probably will be characterized by the continued interest of government in the affairs of individual businesses. This interest will probably grow along the lines of control of investment in the starting and expanding of business, the expanding services of various government departments to either aid or harass the businessman, depending upon his point of view, the continued existence of a heavy tax load, and other similar matters. I think again we must settle for the fact that he who attempts to serve management without a knowledge and appreciation of these expanding relations between government and business will serve management inadequately.

Business and Labor

The competitive economy of the foreseeable future will also stress increasing and maturing concepts of labor's sphere in industry. I have felt for some time that the day would come when responsible, statesmanlike leadership of labor, coupled with responsible, statesmanlike leadership in the executive ranks, would find a more tenable basis for the discussion and solution of mutual problems than has been the case during the past several years.

While the labor movement is in the headlines we think of it in terms of strikes, contract violations, work slow-downs, etc. We will, in my judgment, grow to think of it as but one part of a business movement which eventually will be guided by a somewhat more realistic leadership than large segments of the labor movement now enjoy. I see little difference between the present status of the labor movement and a period of similar development which has been experienced in railroading, public utilities, business combinations, and trusts and investment banking. It seems almost as if new ideas or attitudes must overextend themselves in their de-

velopment of power until the corrective attitude of public opinion brings them back to reality. The promotor, the expansionist, the quick profit people start things and develop them quickly. When they become overdeveloped we seem to find a way to introduce the sane judgment and the statesmanlike approach of operating leadership which must run the machine after it is fixed. I think it is true that we must face the future with the realization that we will never be without organized labor bringing to bear in a constantly increasing sense and in a constantly more realistic atmosphere the attitudes, opinion, and force inherent in such organization.

Business and the Public

This new competitive economy will probably bring with it an increasing sense of responsibility on the part of business executives to project the affairs of their companies favorably in the public eye. More and more of these executives will realize that they must operate in glass houses, that they must win in the long run from having sound products, carefully developed, produced and sold at low cost and at reasonable prices. To accomplish this end they will realize more and more the necessity of a clear, simple plan of organization and the responsibility for the provision of an atmosphere within each business which allows men of ability to grow. They will realize this because it is good business to allow such men to grow. The shortest cut to good products effectively produced and sold at low cost lies in the selection and development of superior people, so organized that their efforts are effectively directed and coordinated in a manner that allows those people to grow as their abilities manifest themselves. I believe it is self-evident, therefore, that you and I must face a future in which the really sound businesses will have a greater sense of obligation to their stockholders, their public, and their employees.

Business and International Trade

It seems quite clear that many more businesses will emerge from the war with their collective ears to the international trade ground than was the case prior to the war. Much of the world is bankrupt in both a financial and a physical sense. It is a truism of economics that the source of wealth and its growth is assured only through production. Such production will need the help, on a thor-

oughgoing business basis, of the American industrial machine, which is all oiled up and ready to go in our own country. It seems clear, therefore, that we must be more aware of world conditions and the handling of foreign trade matters than was required of us in the period of relative isolationism in which we found ourselves prior to 1940.

Probably a number of other trends could be enumerated but these are sufficient to develop background against which we can outline some of the problems that will face the industrial accountant in helping his management find solutions to them.

It may be blunt to say that too large a number of industrial accountants have not prepared themselves to accept the opportunity and responsibility which faces them in such a time of change and challenge. Having been a teacher of accounting once myself, I feel safe in the assertion that we are too eager to consider an accountant competent merely because he understands accounting technique. Our students of accounting give dignified acquiescence to those other courses in the schools of business which deal with marketing, industrial relations, and business organization. The typical student's goal is the C.P.A. certificate which he believes marks him as a finished product in the accounting field. This tendency is not only true of accountants but is equally true of engineers. There is something about the exactitudes of mathematics, work sheets, graphs, temperature readings, and other seemingly exact implements of the trade of the accountant and the engineer which seem to close his mind wholly or partially to the significance of his results and the inexactitudes which lie in almost any practical business problem. Let us see, therefore, what we can do to place ourselves in a position to render realistic service to our managements as they wrestle with these problems that are inherent in the new competitive economy.

Factors in Government Relations

In the field of government and its relation to business, we could probably discuss endlessly the problems which will arise. It goes without saying that most executives will look to either their accounting officer or accounting counsel for interpretation or help on the various tax laws, cases, regulations, directives, and rules which are laid down by government bodies. If the business is

large enough a substantial position may be created, usually within the accounting department, filled by a man who is extremely competent as a specialist in these fields. Smaller businesses usually find it profitable to rely on their accounting counsel for such assistance. Over and above this small day to day requirement lies a broader field. Your management, for example, may be faced with the problem of presenting its case for alteration or amendment of some directive or law, and will have to lean on you to prepare the essential data for that case. You can do only a partial job of such preparation if you attack the problem purely from an accounting point of view. You will have to know, understand, and appreciate the factors of policy and general objectives of the business which will be affected by the action which you are attempting to obtain from the government. In other words, it won't be enough to present the facts, you will have to bring to bear on the problem enough imagination and enough of the newspaper reporter's ability to present those facts in ways that will interest the reader and lead him logically to the conclusion that you want him to reach. I have observed, for example, a number of claims prepared under Section 722 of the Internal Revenue Code. I am sorry to report that those prepared entirely from an accounting point of view have in my judgment little chance of success. Many of these claims would be substantially enhanced by additional evidence which would require a thorough understanding of market analysis, research and development activities, organization problems, and many other factors. While the need for presentation of claims under this code will inevitably pass, other similar presentations to government bodies will be required as government keeps its hand in the operation of private industry. In this field, therefore, it will not be enough for you to be a good accountant; you will have to understand and appreciate many other factors which do not lend themselves to typical accounting treatment.

Factors in Labor Relations

In the field of labor and industrial relations many of us are well equipped technically to develop basic information. Most of us have an understanding of such basic matters as standard cost accounting, time study, standard machine times, and other factors. We fail, however, in breathing life into such basic information which

makes it usable, not to combat the labor movement, but to enlighten it. It does little good to tilt windmills by cussing out the statements which are used by some labor organizers with reference to the facts of the business. It does little good to read printed booklets which show all kinds of incentive systems in the guise of a boogey man which organized labor is told to avoid. Such an exercise may be very helpful in letting off steam; it may generate a great deal of heat, but it will cast little light on the problem. It comes down largely to a question of good old salesmanship. At the moment, the labor leaders of industry have done a better job of selling the rank and file of labor on their program. Industry, on the other side, must meet such a problem in the same way you always meet your competitor—by again outselling him. The basic facts which are in the hands of the accountant need the touch of the advertiser and promoter to make them live. The industrial relations program needs to be brought down from lofty peaks to the plains of realism in terms that the laborer can understand. The facts of business at your command must be fully developed and honestly presented. This requires an ingenuity and a sense of news value of which the typical accountant has little.

Factors in Public Relations

In the field of enlightened public relations, the accountant again has the raw materials. He has the sugar, the flour, and the shortening of business facts, but he lacks the imagination to make the mixture rise. I commend to all of you the reading of the 1944 report of the Caterpillar Tractor Company, and the 1945 report of the Jewel Tea Company as illustrative of the injection of news values into the presentation of the figure facts of two well known businesses. These reports brought out information that the public, the stockholder, and the employee, yes, even the customer could understand. These same figures could have been presented in orthodox accounting form and would have lost 90 per cent of their effectiveness. This sort of treatment on the part of the accountant requires him to have a grasp of the objectives of the business, the underlying philosophy of the business in connection with its relations to the public, and an ability to translate this knowledge through the eyes of a reporter who understands the value of headlines in news presentation.

Figure-Minded Management

You may say this is all very well, but how do we go about placing ourselves in position to render this kind of service to our managements. This is a fair question and I will try to suggest a few answers.

I believe that most business executives are probably more figure-minded than they have been at any time in our lifetime. This has been brought about by the reliance which these executives have had to place in their accounting and financial officers in their dealings with the WPB, the OPA, the Price Adjustment Boards, and in the development of information covering various types of contracts which were used to cover the production of war goods. No matter how sales-minded, production-minded, or personnel-minded the executive was when he entered the war, he had to become figure-minded to move in the atmosphere which surrounded his operations during wartime. It seems to me, therefore, that the first job we might all consider is the ways and means of maintaining this wartime relationship with our executives as we go along the road of the new competitive economy. It is self-evident that the same techniques which were used during the war have many applications in helping executives decide the problems of peacetime production and distribution. For example, a company faced with the problem of quoting a price on a new item to be made in large quantities went through an experience, the requirements of which are very similar to the preparation of a bid for a large portion of the firm's output to be sold through a large mass distributor. Your company may be faced with the question of making a contract with one of the large mail order houses, for example, which would provide an outlet for 20 per cent or 30 per cent of your plant's total production. It may be that your company had never considered such a move prior to the war. It may well be that the head of your company has become intrigued with the possibilities of such a large scale order providing him with a chance to buy materials in quantity, to tool up for low cost operation, and to balance his production curve. If you handle yourself properly you can bring real light to bear on the kind of contract that should be negotiated, the price at which merchandise can be sold, and the probable profit resulting from such an operation. It

is a direct transfer of the reliance which your executive placed on you in negotiating a war contract during wartime. I believe, therefore, that one of the ways that we can all prepare ourselves to render an effective job is to seek out the reasons for improved relationships with our executives which came out of our wartime figure experience, and to have the imagination and the ability to utilize that confidence which these experiences caused our executives to have in us in dealing with practical competitive conditions during and after reconversion.

Applying Wartime Techniques

Probably the war generated more interest in manufacturing methods and standards than has been present for many years prior to the war. Works managers, industrial engineers, superintendents, and foremen were pressed for increased output as they had never been pressed before. They became keenly aware of the possibilities of improving manufacturing methods, developing standards, the installation of incentive plans, and other devices to get the goods out. This experience has made them a receptive audience to the kind of information which you can develop in pointing out places where costs can be cut through the application of the same techniques as they applied in wartime.

Studying Trends in New Fields

Wartime experiences seem to jar us all out of our so-called normal commercial ways of life. The economy of the country was literally turned inside out to produce all kinds of things to implement the war program. Many businesses should be thankful, in a selfish way, that the war arrived to give them a chance to get out of a field in which they were engaged previously. As peacetime commercial operations appear in our new competitive economy, we are seeing all about us radically changed policies being followed by many businesses. A number of prewar products have become wholly or partially obsolete through the technical developments of the war. In many other instances, however, radical changes in products, methods of distribution, and other matters have not been thought through. In the radio industry, for instance, it is claimed that about 90 per cent of the companies which were in existence in 1929 were out of business by 1933. It is self-evident that the

electronics field has had a highly concentrated dose of research and development during the war. I do not have the figures to indicate how many firms which were not in the radio and electronics business are now contemplating entering that field but the number must run into the hundreds. You, as the accounting officer of your business, can render a great service to your management if you will undertake the study of the basic trends in any industry which your management contemplates entering, so that you may cast the cold objective light of the facts and trends upon the contemplated action. In my judgment, therefore, you should give attention to broad industry information and should attempt to interpret the trends of that information. You should also try to bring out the basic economic facts which bear on the desirability and possible profitability of the entrance of your company into any new field.

If you do not have the manpower or the time to do it yourself, I feel that you should insist, so far as possible, that such information be developed and made available before the firm's assets are committed to any radical change. In summary, therefore, you must be ready to help your management through the development of sound practical industry and trend information, objectively presented, so that your management may have the opportunity to bring as many facts as possible to bear on a contemplated action before they take it.

Distribution Cost Studies

This new competitive economy is apt to bring about considerable change in the distribution picture. We have made some studies, for example, in the household refrigerator field. In 1939 and 1940 it was clear that the mass distributor had found a way to move a satisfactory product in that field from the factory to the consumer at demonstrated cost savings. You may recall that in the spring of 1940 one large refrigerator company drastically cut the price of its merchandise, opened branch warehouses, and changed its plan of distribution in an attempt to checkmate, in part at least, the advantage which the large mass distributor had demonstrated. The war came too soon after this move to determine what might have happened, and I raise the example only to indicate what may happen again. It seems transparently clear to me that the drive for lower costs in the foreseeable future may well pre-

sent many opportunities to the well trained accountant to help his management find a way to reduce distribution costs. You will not, as an accountant, accomplish much in this field if you consider the matter largely from the point of view of accounting for or allocating distribution expenses. You will have to gain a knowledge of the marketing processes which might be utilized, and gather information concerning the probable results and changes in the marketing process if a change is applied to your company. Any marketing problem is full of intangibles and your great danger in dealing with this problem as an accountant will lie in your reluctance or your inability to understand the lights and shadows which are involved in practically all marketing decisions. My feeling is, therefore, that you would do well to study the field of marketing and gain a practical understanding of the problems that are inherent in the selection of the proper channels of distribution, the cost of serving marginal areas, the relative advantages of a complete line of products versus specialization, and many other questions.

Personnel Policies

I have indicated previously my belief that one of the shortest cuts to good products and low costs lies in the field of selection and development of superior people whose efforts are coordinated through the use of a practical, sound plan of organization. Superior results in the field of competitive sport provide us with a lesson here. The Chicago Bears, prior to last year, had not only eleven good men, but they had fine second and third line replacements for their first team. I don't want to oversimplify the problem in business by a direct analogy to this condition in competitive sport, but I am sure that if you could critically examine the organization structure and policies of developing people in the same way that I have been privileged to do, you would come more and more to a realization that the really great businesses are "two deep at every position." Industrial and commercial leadership on the part of any company seems to carry with it the obligation to allow people of ability to grow, if outstanding people are to be attracted and held in such number as to maintain that position of leadership. I recall that shortly after V-J Day I was talking with the president of a large company located down state on this very

subject. He said: "We didn't realize how many good people we had until the inevitable shorthandedness of war forced us to place responsibility in relatively inexperienced hands. The war experience has taught us that we must give more attention than we did before the war to the more rapid development of our people and we have set a definite program to implement that idea, even though we now have more competent people than we have an immediate place for." It seems to me that that president has set a course which will provide that company with the priceless ingredient of good executive talent. I believe that you, as the accounting officer of your company, can render service to your management in calling attention, through your natural examination of the payroll and salary structure of your business, to those situations in which the company is vulnerable because of inadequate development of executive replacements.

Organizational Structure

I feel that one other major problem that will face most of us lies in the field of organization. I am talking here of the structure of the organization and not the people who operate within the structure. We are all familiar with many disruptions of the plan of organization due to wartime necessity. I feel that the accounting officer can render help to his management by calling attention to duplication of effort, lack of clarity in the handling of activities, and other weaknesses in organization structure. I feel also, however, that in this field the accounting-trained man is apt to make serious mistakes because he will attempt to deal too objectively with the subject of organization which, in the last analysis, is very much of a subjective matter. It will help you somewhat to become familiar, through reading in the field of organization, with certain so-called principles or criteria by which a given organization structure can be appraised. These criteria probably can be found in at least fifty books and articles. The essence of the help you can give your management lies not in calling attention to those aspects of your company's organization which do not fit the so-called pattern. Your help can be realistic only if it can bring out ways and means to amend your organization structure, judged primarily on the basis of the ability of the amended structure to utilize more practically the abilities of your

present personnel. You can attack this from the cost point of view, from the point of view of fixing authority for expenses, and other natural avenues which are open to you in the performance of your accounting function. I suggest, therefore, that you become familiar with the subject of organization through reading and discussion and, armed with that information, you look into your own structure with a practically critical eye, trying to find ways to eliminate or checkmate the limitations which your present structure seems to have.

Analysis of Accounting Department's Operations

It seems to me there are two more natural avenues that you should explore carefully in preparing yourself to render better service in this new competitive economy. The first requires a careful analysis of your own department's operations to bring them to a low-cost basis. Review the reports which are needed by the management to run the business, look into methods of order handling, stockkeeping, and other methods and procedures problems. Review the organization structure that you have to perform the accounting function and see if there are duplications or eliminations that need attention. Review your installations of mechanical equipment in terms of effectiveness and cost. Re-appraise the people that you are using to man your organization and take the same medicine in your own department that has been indicated previously for other departments.

In other words, the first thing to do is to get your own house in order to produce accurate and interesting reports as rapidly as possible and at a low cost.

Again, it is necessary for the accountant to develop a service point of view. The accounting officer is a staff executive and does his work best when he finds ways to motivate people to accomplish the ends he desires. Don't be too smart. Don't be intolerant. Don't let your mathematics get the better of your judgment. Find out how to handle people. Find out how to plant ideas with line executives and let them get credit for the generation and perfection of the ideas. Help line executives to plan and consider the results of their contemplated operations in terms of the budget idea. In short, learn to be an effective, respected "servant in the house."

I have in this discussion consciously stayed away from matters of accounting technique and accounting practice. I have felt for many years that the schools of commerce do a fine job in the realm of accounting technique, just as the schools of engineering have done a fine job in the realm of engineering technique. It is my hope that these thoughts may suggest to some readers a number of business problems upon which they can render service in helping management utilize the facts that accountants equipped with sound techniques and with a constantly developing imagination, vision, flexibility, and ability to get along with people can provide and help make effective.

The Cost Accountant

"What is the basic reason that Mr. May finds cost accounting imaginative, venturesome, and unconventional? The answer to that question, I believe, is that the cost accountant has been primarily a student of the business. And in this study he was often greatly aided by knowing little, if anything, about accounting as conventionally conceived. Indeed, at times his greatest asset was that he didn't know a debit from a credit. However, he did know how to observe, assemble, sort, and coordinate facts about the business. Furthermore, he has received immeasurable aid from the necessity of working and cooperating with specialized knowledge, abilities, and skills of every hue of the rainbow: engineers, chemists, salesmen, personnel men, lawyers, managers, psychologists, publicity men, idea men, foremen, operators. He has been enrolled in a kind of liberal arts school in business, engaged in a sort of rough-and-tumble coordinated research about the business enterprise.

"In brief, the cost accountant has been first concerned with 'knowing' the business enterprise and second with putting that knowledge into the accounting form. This is the right order of things and is fully consistent with the fundamental nature of accounting."

From *"Basic Education for Accounting in Business"* by John W. McMahan in The Accounting Review, April, 1946.

ACCOUNTING AND PROFIT DETERMINATION FOR CONSTRUCTION CONTRACTS

By Roy M. Abagnale, C. P. A.,
Springfield, Mass.

ON FIRST thought this subject does not appear to have a wide appeal, particularly to cost accountants who for the most part are devoted to industrial problems, but on analysis it will be found that many of the problems in construction accounting either parallel many of the phases of industrial accounting or provide information and methods which sometimes can be applied to industrial accounting problems. It might be well to note here that while the subject matter covers a field which prior to the war ranked, as a rule, at least among the first five in volume of business done throughout the United States, from an accounting standpoint very little has been done towards disseminating information concerning construction contractors' accounts.

Some years prior to the war, while I was practicing in New York, I was on the Committee on Construction Contractors' Accounting of the New York State Society of Certified Public Accountants. One of the very first steps that the Committee undertook was to ascertain the extent of accounting literature on the subject. The libraries of the American Institute of Accountants, the New York State Society of Certified Public Accountants, the Society of Engineers, and the public libraries were all visited, but, much to our surprise, we found that treatises on the subject of accounting for construction contracts were negligible. As a result of the Committee's work and surveys, the New York State Society of Certified Public Accountants initiated open forums or technical sessions in an effort to correlate and standardize, if possible, accounting theories and principles in this field. Our Committee for a number of years consisted of about ten practicing accountants and several members of the Society who were connected with construction companies as either partners or employees, and our open forums on the subject led to much discussion and some standardization of practice. We became so ambitious, in fact, that the Committee decided to write a treatise or book on Construction Contractors' Accounting, but, unfortunately, the war years interfered with that program.

It is probable that the construction industry will rank first in volume of business in the United States for a number of years to come, taking into account residential and industrial construction, highway construction, tunneling construction, airport construction, and water front and channel construction. When you analyze these phases of the construction industry you begin to appreciate the tremendous volume of business involved. From the accountant's point of view, it seems to me that the construction industry is a very fascinating one. To those of us who have to sit in an office dealing with figures most of the time, watching creative work is always fascinating. The construction industry is romantic, too, in that it has its ups and downs, particularly downs. I believe that there is no other industry in the country which has as many failures as the construction industry. Its risks are many and part of those risks can, in many cases, be attributed to the fact that accounting records and data have been all too insufficient.

Because of space limitations, I shall be able to cover only the high spots of construction accounting. I realize, of course, that this cannot be altogether satisfactory, since so many phases of the subject which tie in directly or indirectly with what will be said cannot possibly be covered.

Basic Accounting Records

Essentially, the problems in accounting for construction contractors are about the same as those for any other type of industry, and like many an industrial plant, the need for adequate records cannot be over-emphasized. At the outset I should like to set forth those subsidiary records which are essential to the conduct of a successful general contracting business. First, of course, we must have our general ledger, cash book, journal, and purchase journal or voucher record, together with the necessary detailed accounts for accounts receivable and payable. Then, a general contractor should have an equipment record which will provide information concerning the nature of equipment, from whom acquired, the purchase date, size, capacity or rated horse power, original cost, provision for installation or additional costs, provision for its principal storage place, provision for a record of the equipment as it is moved from job to job, and a provision for rental rate. Here I might say that while equipment owned by

contractors is generally used in connection with jobs they undertake, it is quite common and the practice of many contractors to rent such equipment to other contractors when it is idle. The record should also show the estimated life in years or work hours and rate of depreciation.

Equipment Operating Cost Ledger

Next, one of the essential records for a contractor to maintain is an equipment operating cost ledger. While it is not the general practice in industrial accounting to maintain operating costs with respect to each piece of operating equipment or machinery, it would appear that in the general contracting business this is more or less essential, due to the fact that the same degree of control which is exercised in a manufacturing plant is not available with respect to contractors' equipment. Also, many pieces of contractors' equipment become obsolete and inefficient, and operating costs are likely to increase appreciably as a result. This operating cost record is an essential record and will, over a period of years, furnish the contractor with dependable information on which the accountant can base a reasonably accurate allocation of costs to specific jobs.

Job Cost Record

Still another record which the contractor must maintain is the job cost record. That is a record of each job as to location, material costs, labor costs, overhead, equipment charges on all equipment, equipment rental costs, field office expenses, traveling and entertaining chargeable directly to a job, and sundry direct costs such as insurance, payroll taxes, outside engineering fees, and the like.

Contract Ledger

Lastly, a contractor should maintain a form of contract ledger with respect to each contract he undertakes to perform, showing the exact location of the job, the principal sum of the job, a column for extras in connection with the job, the period of the contract or time within which the job must be completed, and any other pertinent informattion which may be included in such a record to augment data which a particular contractor may desire for his guidance.

Before proceeding with the discussion of the several methods of accounting and the accounts as maintained by construction contractors, I think it wise that we should note at this point that unlike the ordinary sales contract in which title passes when merchandise is delivered and a bill is rendered thereon by the seller, in the contracting business the owner, that is, the party for whom the work is being done, ordinarily certifies, through his engineer or architect, the amount that he has accepted and for which he is willing to be billed. Again let me point out the risks that are involved in the contracting business which consists of a contract to do a specific job, generally for a stated sum of money, and usually within a prescribed period of time, and that all of these factors are subject to inclement weather, undisclosed or unknown hazards, heavy wear and tear on equipment due to movements from job to job and exposure to the elements.

Bases for Profit Determination

Broadly speaking, there are two bases of accounting for construction contractors.

1. The completed contract basis or method.
2. The accrual or annual basis or method.

Under the first method, profits are withheld from the profit and loss statement until the completion of the contract; while under the second method profits on contracts in progress are estimated periodically to determine that portion of the profit or loss which has accrued on work done to date and which should be taken into account. With these facts in mind, we can now proceed to a consideration of some of the distinguishing features of contractors' accounts.

Accounts Receivable

In running over the accounts appearing on the asset side of the balance sheet, we would probably find very little difference in the accounts as compared with an industrial balance sheet except for possibly three or four accounts, the first of which is Accounts Receivable. Under this heading, we are likely to find a number of variations from the usual trade accounts receivable. First, we will find those accounts receivable which have been approved, are

collectible within a short period of time, and, therefore, are current. In addition, we may find accounts receivable which, while they cover work done, are in dispute for some reason, particularly where extras are involved. Also, we will find that part of the accounts receivable is deferred for a period of time, generally until completion of the contract, due to the fact that it is common practice for the owner to retain a stipulated percentage of the amount billed by the contractor as security for the performance of the contract. If the latter two items are not current as has been suggested, and not likely to be paid in the usual course of business, they should naturally not be classified as current assets. In connection with the accounts receivable control account, it has been found expedient and advisable to maintain in subsidiary records an analysis of accounts receivable as to total billing, billing for extras, and retained percentages.

Inventories

Second in the list of accounts on the balance sheet which will bear some examination is the Inventory Account. This account generally consists of:

1. Work in process.
2. Inventories of excessive materials, repair parts for equipment, and supplies.

The work in process account is debited with the cost incurred in connection with jobs in progress, that is for materials, labor, overhead, and other direct charges, and is credited with the billings on the completed portion of the contracts, pursuant to estimates or the terms of the contract. The net balance, if a debit, is generally carried on the balance sheet as a current asset. In the open forums which I mentioned previously, we found varying practices among accountants with respect to work in process.

It is the contention of some accountants that even though profits on uncompleted contracts are not taken into the income statement, they nevertheless prefer to show work in process as an asset below the current asset line and to take up on the other side of the balance sheet, as deferred income, the estimated profit on the portion of the contract completed. It is the contention of some accountants that this practice more clearly reflects the actual value of

work in process. However, it is probably the consensus of opinion among accountants that, while this opinion is not unreasonable, it is nevertheless the more conservative practice to show work in process as a figure representing the difference between costs incurred to date and progress billing. The hazards of the contracting business are such that what may appear to be a profit today may be a loss tomorrow, and for that reason conservatism is stressed. Where the contractor ordinarily uses the annual or accrual method of accounting, the work in process account would naturally be adjusted periodically for profits included therein which were carried to the income account. It should be borne in mind that any appraisal of the work in process account must take into consideration the elements of unbalanced bids, losses incurred to date on that portion of the contract which has been completed, and any other factors. If these elements are present proper adjustment of the work in process account should be made, and such losses or adjustments carried in another section of the balance sheet or charged off to profit and loss or surplus. Sometimes, as a result of unbalanced bids or because of excessive billings on the completed portion of contracts in progress, a credit balance in the work in process account will result. Under the completed contract basis of accounting, this credit balance would be carried in the balance sheet as a current liability and shown as excessive costs billed to date.

A word of caution is suggested to the accountant at this point. If the contractor employs the annual or accrual method of accounting, that is, estimates profits on uncompleted contracts in progress for the purpose of showing such profits in the income statement, the accountant should see that adequate reserves are provided and that the various methods of computing the estimated profit on contracts in progress, about which more will be said later, are used, in order to avoid unwarranted distribution of profits, payments of income taxes, and subsequent revisions in the income statement.

Deposits

Further down the line we come to the Deposits account. In a very active concern this account may be of substantial amount, due to the fact that there is generally a deposit of from one per

cent to ten per cent of the contract price to be made in connection with the contractor's bid. Very often there are also deposits on plans and specifications. These deposits should be so classified in a subsidiary record that items of a current nature are included in current assets, while items not collectible for an extended period of time are classified under the line.

Fixed Assets

In connection with the item of fixed assets, it might be well to point out that generally contractors classify their equipment into three categories:

1. Heavy machinery and equipment, such as shovels, cranes, derricks, dredges, tractors, bulldozers, compressors, graders, rollers, scrapers, etc.
2. Miscellaneous tools and equipment, such as pneumatic hammers, hose, cable lines, explosive equipment, picks, shovels, and the like.
3. Trucks and autos.

The above classifications, with the exception of miscellaneous tools and equipment, should be accounted for through the use of the plant ledger. Often included in the miscellaneous tools and equipment are transits, field office equipment, and other items. The cost of operation and maintenance of these miscellaneous tools and equipment is generally absorbed by contractors in their overhead accounts. A point of interest to the average accountant in connection with contractors' equipment is the fact that very often contractors will purchase equipment for a specific job and upon the completion of that job will dispose of the equipment, rather than carry it for a future job. Where this procedure is prevalent contractors resort to the inventory method for the purpose of ascertaining the cost of equipment chargeable to a specific job, rather than the use of a depreciation or unit cost charge. Normally the average contractor will establish a unit cost of operation for such a piece of equipment, such unit cost being an hourly, daily, or monthly rate which is used for allocation of costs charged to a specific job.

Deferrals

Several other accounts which find favor among contractors are Deferred Accounts Receivable and its contra entry, Uncompleted Contracts. The purpose of these accounts in the general chart of accounts is to reflect the unbilled portion of the uncompleted contract in progress. The accounts are set up at the inception of the contract for the total amount of the contract, and as progress billings are made a charge to Uncompleted Contracts and a credit to Deferred Accounts Receivable would be made for the amount of such billings. However, these accounts are not as a rule reflected in the balance sheet.

The liability side of the balance sheet requires very little comment except for accounts which have heretofore been mentioned, with the exception that the general contractor retains a percentage of billings made by subcontractors to him. These retained percentages are held until the completion of the contract, much as they are in the contractors' own case with the owner.

We come now to a review of the income statement which, as you know, during the past decade especially has become the paramount statement in accounting. By that I mean that the emphasis seems to have shifted from the balance sheet to the profit and loss statement. This would seem to be especially true in construction accounting where the risks are many, and all too often the facts are few. I have already mentioned the two bases of accounting, namely, the completed contract basis and the accrual or annual basis.

Determining Profits

Under the completed contract basis, we know that income is not taken into the income account until the contract is completed. Under the accrual or annual method of accounting, income is taken into account as the contract progresses. Very often, however, we find a combination of the two methods in use among contractors. That is, the completed contract basis is used with respect to all small contracts while the accrual or annual method of accounting is employed with respect to long term contracts. It might appear that a contractor who employs such a combination of accounting is being inconsistent. However, I believe that the consistency lies in according the same treatment to the same set of conditions from

year to year. At this point it may be noted that although profits on completed contracts are not taken into account until they are completed, the same is not necessarily true of losses under this method. Where losses on contracts are apparent, they either should be incorporated into the income statement or a proper notation should be made on the income statement in the way of a footnote. This we recognize as one of the cardinal accounting principles.

I should like to review the several methods in use by contractors of computing profits or losses under the accrual method of accounting. They are as follows:

1. Billings less costs to date.
2. Costs plus a percentage of profit.
3. Percentage of completion.
4. Percentage of cost of operation.
5. Cost accounting.

Billings Less Costs to Date

The first method, or billings less costs to date, is perhaps the simplest method for computing profits or losses. This method may be used advantageously by a contractor who has constantly in process a number of small contracts which are completed within a relatively short period of time from date of beginning of construction. However, this method of accounting does not necessarily reflect an accurate appraisal or determination of income earned on the contract.

"Cost Plus" Contracts

The second method, or cost plus contracts, is computed by applying the agreed percentage of profit to the cost of work at the date of billing. Some cost plus contracts provide bonus arrangements, whereby the contractor is entitled to an added bonus if the cost is kept within a stated limit. Such additional profits should be spread ratably over the life of the contract, and if there are any known excessive costs to be incurred under the uncompleted portion of the contract, such potential losses should likewise be ratably applied against the entire contract and an adjusted rate of profit on the contract determined.

Percentage of Completion

The third method, or percentage of completion, is determined by applying the percentage of completion as certified by the customer's architect or engineer to the estimated profit on the contract, or to the contract price, and deducting therefrom the costs applicable thereto.

Percentage of Cost of Operation

The fourth method, or percentage of cost of operation, requires careful inquiry in order to ascertain that the amount of expense incurred to date may properly be used to calculate the percentage of completion. Under this method the ratio of costs incurred to total anticipated costs on contract is applied to estimated profit or contract price to determine the amount of profit or loss to date. Such an examination might disclose that unusual or unanticipated conditions have increased the costs to date, and that extraordinary expenses are likely to be incurred in later operations, so that the percentage of cost to date to total anticipated cost under the contract may result in a distortion of the percentage of completion. For example, let us assume the following facts:

Total contract	$100,000
Total estimated cost	80,000
Estimated profit	$ 20,000
Total cost to date	$ 20,000

The facts as shown would indicate that the job is 25 per cent complete, resulting in an estimated profit to date of $5,000. However, investigation might reveal that the work completed to date is only 15 per cent of the total work to be done, and on the assumption that the cost to date of $20,000 will apply ratably throughout the contract, we find that the total cost under the contract would then be estimated to be approximately $133,000, indicating instead of a profit as previously anticipated, a probable loss on completion of approximately $33,000. Consequently, 15 per cent of $33,000 would result in a $5,000 loss to date. The same result may be obtained by applying 15 per cent to the total contract price of $100,000 and deducting therefrom the total cost to date, $20,000, resulting

in a net loss of $5,000 to date; in substance, a verification of the previous method.

What I am trying to stress here is that, while costs of operation may in some instances be a reasonable basis for the computation of estimated profits or losses, it is necessary to check and recheck the results with the other methods in order to be sure that the results obtained are not distorted.

Cost Accounting Method

The fifth, or cost accounting, method conforms more closely than any of the others to industrial accounting practice. Under this system determined costs are applied to the completed units, the net difference between the unit billing price and such unit costs representing the gross income. For example:

Number of cubic yards excavated	1,000
Cost of excavating, accumulated	$300.00
Unit cost per yard	$ .30
Billing price per yard	$ .50
Profit per yard	$ .20

When this method is employed, costs must be kept in sufficient detail by type of operation.

Unbalanced Bids

To add to the general confusion, there is also the question of unbalanced bids. Very often a contractor, anxious to obtain a large contract for which he has insufficient capital to begin the contract, may resort to an unbalanced bid. Let us assume a $1,000,000 contract on which there is considerable excavation, concreting and erection. Assume further that normally the bid prices for this work would be as follows:

Excavation	$100,000
Concreting	300,000
Erection	600,000

If the contractor in this instance had made up his bid on the basis of excavation $200,000, concreting $400,000, and erection $400,000 he would obtain the greater profit in the early stages of the contract and the latter stages of the contract might easily re-

sult in losses. In such instances, the estimated profit on this contract should be determined as a whole and the percentage of completion to date, based on reliable estimates, should be applied to the total estimated profit on the contract, or contract price, thus avoiding the inclusion in current income account of an inflated profit and the need for correcting that profit at a later date by losses that might reasonably occur. Contracts should be considered as a unit and not as a series of units.

Overhead Costs

One of our pet subjects is overhead costs, and their application in construction accounting is of interest to all. However, this phase of the subject is a study in itself and might well be covered at some future date. It can be said, however, that a good deal of overhead allocation depends on the size of the contractor and the adequacy of records maintained. Among the average small contractors very little attempt is made to allocate overhead costs to specific jobs. All overhead expenses, such as administrative and office salaries, general office expenses, depreciation of equipment, major repairs of equipment, insurance on equipment, rent, taxes, and other items are carried in the accounts and set up in the income statement much the same as the average small commercial concern might do. With the larger contractor, however, as with the large industrial plant, overhead costs are an integral part of the cost of the contract and elaborate records, including detailed costs of operation, time records of administrative personnel, operating costs of units of equipment, and the like are maintained for the purpose of spreading this overhead to the respective jobs in an acceptable manner. These conditions prevail also with respect to payroll records. Here again the small contractor will resort to a separate payroll record for each job while the larger contractor will maintain adequate payroll records in the home office, keeping time cards and all the necessary data concerning employees in the field.

The construction industry is a major industry in this country and I hope that as time goes on the various accounting bodies, including the N.A.C.A., will give more and more consideration to the problems of Construction Contractors' Accounting, in an effort to standardize accounting practice in accordance with sound accounting and cost principles.

A SIMPLIFIED METHOD FOR FIGURING PAYROLLS

By Milton E. Mengel, Director of Industrial Division, Burroughs Adding Machine Co., Detroit, Mich.

WHEN employees work at hourly rates, the earnings and deductions based on earnings vary from week to week, depending on the number of hours worked. If the hours worked each week were always the same for each employee the problem of calculating and preparing the payroll would be greatly simplified, as the payroll would be the same each week.

A large percentage of employees work standard work weeks even though paid at hourly rates. Often a single variation from the standard work week applies to a large group of employees. If a table for the more common variations and for the standard work could be set up in advance, payroll calculations would be simplified. Detailed calculations would then be limited to employees having unusual variations, of which there are few.

Conditions in a Typical Plant Studied

The possibility of using tables was studied in a typical industrial concern having about 3,600 employees. The concern is located in a highly industrialized city. At the time of analysis overtime was prevalent but a forty-hour work week has since been adopted. Below are shown the averages of the standard work week and the variations from the standard common in this plant at the time of analysis.

Standard work week	62.0%
Late 1/10 hour (1 to 6 minutes)	3.0
Late 2/10 hour (7 to 12 minutes)	1.5
Absent ½ day—counted as vacation with pay Absent ½ day—not counted as vacation with pay	7.2
Absent Saturday	1.2
Absent 1 full day—counted as vacation with pay Absent 1 full day—not counted as vacation with pay	8.1
Absent 2 full days—not counted as vacation with pay	1.3
Total	84.3%

In this company, more variations than usual occur because of the 50-hour work week consisting of five nine-hour days and five hours on Saturday. Vacation and holiday allowances are based on an eight-hour day. From the foregoing it is evident that if a table of earnings, F.I.C.*, and withholding tax were readily available for the common conditions approximately 85 per cent of the payroll calculations could be saved.

Operating Procedure

In the concern referred to, a quantity of tickets was prepared for each employee, each ticket showing earnings for the nine common variations together with F.I.C., withholding tax, and other deductions applicable. These were filed behind employee tabs in clock number order. A sample ticket is illustrated in Exhibit 1.

With these tickets, payrolls are prepared quickly and easily. When clock cards are received they are first marked to show hours worked, premium hours paid, and vacation or holiday hours allowed, if any. A ticket is then pulled to match each clock card. The ticket is compared with the respective clock card and, if the hours worked are standard without variation, both clock card and ticket are turned over without any indication on the ticket. Sixty-two per cent of tickets are handled in this manner. If one of the variations set up on the ticket applies a line is drawn under it with red pencil (22.3 per cent of tickets). If a variation occurs that is not set up on the ticket, earnings, F.I.C., and withholding tax deductions are calculated and written on the ticket in the blank space provided at the top. This is necessary on only 15.7 per cent of the tickets, however, as 84.3 per cent fall within the prefigured classes.

When an employee's earnings reach $3,000 for the year, a line is drawn down the F.I.C. column on the employee ticket so that such deductions will no longer be made. Exhibit 2 shows a ticket illustrating a nonstandard condition, with the hours and amounts applicable in the specific instance written in the blank space near the top of the form.

* F.I.C. refers to Federal Insurance Contributions, more commonly known as F.O.A.B. In the exhibits shown it is calculated at 2 per cent rather than the present rate of 1 per cent.

3104 2 .85 .85
John B Smith 2

HOURS WORKED	OT-VH HOURS	REG. EARN.	OTHER EARN.	TOTAL EARN.	F. I. C.	WTH. TAX
50.0	5.0	42.50	4.25	46.75	.94	5.42
49.9	4.95	42.41	4.21	46.62	.93	5.39
49.8	4.9	42.33	4.17	46.50	.93	5.37
45.5	4.75	38.67	4.04			
	4.0	VH	3.40	46.11	.92	5.29
45.5	4.5	38.67	3.83	42.50	.85	4.54
45.0	2.5	38.25	2.13	40.38	.81	4.10
41.0	4.5	34.85	3.83			
	8.0	VH	6.80	45.48	.91	5.16
41.0	2.0	34.85	1.70	36.55	.73	3.31
32.0	1.5	27.20	1.28	28.48	.57	1.64

BOND DED.	BENEFIT DED.	HOSPITAL DED.		
10.00	.65	.00		

EXHIBIT 1

3104 2 .85 .85
John B Smith 2

HOURS WORKED	OT-VH HOURS	REG. EARN.	OTHER EARN.	TOTAL EARN.	F. I. C.	WTH. TAX
23.0	1.0	19.55	.85	20.45	.41	1.26
50.0	5.0	42.50	4.25	46.75	.94	5.42
49.9	4.95	42.41	4.21	46.62	.93	5.39
49.8	4.9	42.33	4.17	46.50	.93	5.37
45.5	4.75	38.67	4.04			
	4.0	VH	3.40	46.11	.92	5.29
45.5	4.5	38.67	3.83	42.50	.85	4.54
45.0	2.5	38.25	2.13	40.38	.81	4.10
41.0	4.5	34.85	3.83			
	8.0	VH	6.80	45.48	.91	5.16
41.0	2.0	34.85	1.70	36.55	.73	3.31
32.0	1.5	27.20	1.28	28.48	.57	1.64

BOND DED.	BENEFIT DED.	HOSPITAL DED.		
10.00	.65	.00		

EXHIBIT 2

Setting Up the Plan

The work required to set up this plan is not extensive. In the case of the concern studied, the calculation of earnings for each of 79 rates for the nine different classifications was equivalent to 20 per cent of one week's payroll calculation. A rate chart was prepared for each rate on which were also shown the F.I.C. deduction and withholding tax deductions for only those exemption units that were active. A sample of this chart is shown in Exhibit 3.

At this point a test was made to determine how much time could be saved in wage calculating by copying earnings and tax deductions directly on clock cards from the rate charts. This saving was only 8 per cent of the time required under the usual rating and calculating practices.

From these rate charts, a rate master card was prepared for each rate and exemption unit showing earnings, F.I.C. deductions, and income tax deductions. An employee master was also made for each employee showing the employee's other deductions. These masters may be prepared by some duplicating process, or printed in the case of a rate master, if the number required is large enough. The rate master when completed looks like the card in Exhibit 1, except that the name and other information pertaining to a specific employee is omitted, both at the top of the form and in the boxes at the bottom. The employee master card shows payroll number and name, and fixed deductions (for bonds, etc.).

With these masters, tickets are created for each employee to take care of several weeks' requirements, the number depending upon anticipated change. The rate masters are filed by rates and units of exemption with a supply of tickets sufficient to take care of estimated requirements. The employee masters are filed in clock number order with a supply of completed tickets. To replenish the supply of completed tickets for any employee it is necessary only to pull the required number of tickets from the rate file and run them through a duplicating machine to insert the information from the employee master.

Advantages

This plan offers many advantages in payroll calculation. Some of them follow:

RATE .85

HOURS WORKED	OT-VH HOURS	REG. EARN.	OTHER EARN	TOTAL EARN.	F. I. C.	WITHHOLDING TAX 0	1	2	3	4	5	6	7	8	
50.0	5.0	42.50	4.25	46.75	.94			5.42		1.46					
49.9	4.95	42.41	4.21	46.62	.93			5.39		1.43					
49.8	4.9	42.33	4.17	46.50	.93			5.39		1.41					
45.5	4.75	38.67	4.04												
	4.0	VH	3.40	46.11	.92			5.29		1.33					
45.5	4.5	38.67	3.83	42.50	.85			4.54		.85					
45.0	2.5	38.25	2.13	40.38	.81			4.10		.79					
41.0	4.5	34.85	3.83												
	8.0	VH	6.80	45.48	.91			5.16		1.20					
41.0	2.0	34.85	1.70	36.55	.73			3.31		.69					
32.0	1.5	27.20	1.28	28.48	.57			1.64		.47					

1025

EXHIBIT 3

1. Eliminates rating.
2. Eliminates checking of rates.
3. Eliminates 84.3 per cent of the wage calculations.*
4. Eliminates 84.3 per cent of the checking calculations.*
5. Eliminates 84.3 per cent of F.I.C. calculations.*
6. Eliminates 84.3 per cent of income tax calculations.*
7. Eliminates copying deductions on clock cards or rough payroll, or the handling of separate deduction record cards.
8. Provides complete, easy-to-handle media for preparing payroll records.
9. Provides a simple means for flagging the tickets of employees whose earnings are no longer subject to F.I.C. deductions, merely by the drawing of a line through the F.I.C. column or omitting the figures from it.

Payroll calculations by this method require only 23.4 per cent of the time required under the usual procedure, contrasted with the 92 per cent required during the test run when extensions were copied from rate charts (Exhibit 3). Accuracy also is greater since on 84.3 per cent the writing of earnings and deductions is eliminated. One of the most important advantages of the plan is that the payroll calculations can be completed sooner, overtime in the payroll unit can be eliminated and, therefore, the work of actually writing the payroll check or payroll envelope can be started sooner.

* The percentage of calculations eliminated is that obtained in the typical concern studied. It will, of course, differ in specific cases.

OUR OPEN FORUM

Postwar Pricing

Editor, N. A. C. A. Bulletin:

I read with great interest the comments of Mr. Eggeman in the *Bulletin* of April 1. Apparently the chief point of difference is that Mr. Eggeman argues against the conclusions which might be reached if costs and differential costs were displayed in the manner suggested.

I think that pages 215 to 220 give ample evidence that the dangers are understood, but the purpose of this paper was to point out that it is not the job of the cost accountant to make these policy decisions and that his work is at fault when, because he does not disclose the elements going into his costs and the assumptions upon which they are based, he deprives the management of the chance to consider alternatives. Under such conditions, the cost accountant succeeds in doing indirectly what he would never be permitted to do directly, unless as usually happens, the management goes ahead, using its innate business sense and ignoring the cost accountant's figures.

Until N. A. C. A. defines terms with exactness, I suppose that we are free to use our own terms, providing we define them. (See pages 222, 223, 224). The term "constant costs" was used to designate certain types of costs some of which are otherwise classified as fixed costs and others as semi-variable costs. Using four classifications instead of three, we are able to confine fixed costs to items such as rent, property taxes, interest on funded debt, interest on mortgages, franchise taxes, etc. which go on even though there may be no productive activity or in fact no operating organization. The use of this four-fold classification enables us to take out of semi-variable costs that very large body of costs which is static. These costs include the basic management group and the minimum operating organization of supervisory, technical, and skilled personnel. When such costs are treated as semi-variable costs and are charted, not theorectically but realistically, (i.e., reflecting what the management would actually do in a given situation) it will usually be found that while semi-variable costs rise in a series of steps, there will be one long plateau which may run over a wide range of production. This reflects the management's determination to retain its basic organization through wide fluctuations in volume. These costs and this policy is such an important factor in many industries that I suggest it warrants specific classification and disclosure as a separate element of cost so that the problem of its recovery and the effect on pricing policies, when it has been recovered, may be understood and dealt with.

Harry E. Howell,
Providence Chapter.

The Factory Accountant's Place in Management

Editor, N. A. C. A. Bulletin:

Mr. Jarchow's article in the February 15, 1946, issue of the *Bulletin* goes a long way in explaining the many contributions which the factory accountant can make to the efficient and successful operation of a plant. Many plant managers and executives look upon their factory accountants as clerks or "high-priced bookkeepers" whose heads are stuffed with debits and credits and very little of anything else. I have found this attitude to prevail in large plants as well as in small plants. Very often this attitude is due to the lack of vision and resourcefulness on the part of the factory accountant who lacks the necessary "push" or who is too timid to advance to management the ideas and knowledge which he has gained in his position as factory accountant. Often a little encouragement from the management is all that is needed. I hope that Mr. Jarchow's article will cause many plant managements to recognize the vital assistance which their factory accountants can give them.

I have found many instances where the factory accountant himself is responsible for being relegated to a "back seat." I believe Mr. Jarchow's article did not emphasize this point enough. I have known factory accountants who were brilliant and capable and who could fill the bill outlined by Mr. Jarchow, but lacked tact and diplomacy. These men assumed a superior attitude at meetings and in their association with other members of the management who lacked accounting training and were therefore "a little slow on the trigger" in grasping what the factory accountant suggested.

The factory accountant should present his suggestions in simple, nontechnical terms and be patient in his explanations or answers to questions asked by executives not trained in accounting. The factory accountant should remember that figures often tell only part of the story and often do not disclose causes.

I think Mr. Jarchow's suggestion to operating men that they "appreciate that there may be a number of kinds of costs, each one appropriate and correct for the purpose for which it is intended, but incorrect and misleading if applied to the wrong situation" is something which factory accountants as well should always remember.

Mr. Jarchow's article should stimulate thinking on the part of plant managers who are presently failing to recognize the valuable assistance which their factory accountants can render to them, and on the part of factory accountants who are presently not a part of the "team" because they haven't "sold their wares" properly.

Arthur Barkstedt,
New York Chapter.

Useful By-Products of a Standard Cost Routine

Editor, N. A. C. A. Bulletin:

Maitland A. Smith in the April 1, 1946, *Bulletin* concludes by stating that he intended to provide thought-provoking comments so that readers would examine their respective standard cost routines, but not with the thought that action to change be taken "tomorrow". The article interested me because of conditions now existing at our textile mill. Material shortages and price ceiling increases after standards had been set up early in the year created a major problem.

In this article, aid to internal auditing has been stressed in that the auditing staff is aided through analysis of unusual variances. Further, new ceiling prices, changed over and over again on the same material, will result in a situation directing the auditor's attention to vouchers paid, regardless of price variance trends. At the same time, standards set for a yearly period, when compared with actuals constantly on the rise, will result in a strange price variance which in turn becomes a barometer for the auditor. This so-called barometer also provides management with figures for mapping future financial plans.

Control of valuable materials is also stressed in comparing actual and standard usage of materials whether of high unit or low unit value items. In the case of a plant which purchases a part of its yarn requirements, production schedules and usage variances are affected, since the prices paid and the current yarn shortage result in substitutions of a yarn count not originally provided for when setting the standards. This scarcity now places yarn high on the list of valuable materials which thus merits more attention from management's viewpoint. The price and usage variances on yarn, therefore, become important measuring tools in the hands of management and must be readily placed there as well as carefully watched. High-priced substitutions in the line of low-priced chemicals and other processing materials, when compared with the standard as planned at the year's beginning, will result in price and/or usage variances which tend to place these substitutions in the valuable materials category.

Physical inventory is priced with less experienced help and yet with satisfactory accuracy where standards are in use. Without available standards for pricing inventories, the present pyramiding of prices would result in such a problem when pricing physical inventories that only an experienced cost person could perform the task efficiently. With standards already set up, the effect of these price rises has made its appearance in the variances where the experienced cost personnel and management focus their attention; meanwhile, inventory pricing is in the hands of the less skilled personnel. Thus, marked price rises, market shortages, and material substitutions do not affect the pricing job, but they are none-the-less constantly brought to the attention of the cost supervisor.

The accountant must of necessity look ahead to having his figures analyzed by auditors. Meanwhile, he must work with foresight in order

to be ready for a physical inventory maintaining a standard cost routine flexible enough to bring important variances and trends to the fore for management's consideration. For these reasons Mr. Smith's suggestions strike home.

RAYMOND F. HAND,
Providence Chapter.

THE FACTORY ACCOUNTANT'S PLACE IN MANAGEMENT

Editor, N. A. C. A. Bulletin:

Mr. Christian E. Jarchow in his article, "Factory Accountant's Place in Management," published in the N. A. C. A. *Bulletin,* February 15, 1946, brings into the open for discussion and consideration numerous problems confronting our profession during the present and future reconversion periods.

The comment concerning "Costs for Inventories" interests me for it approaches a problem deep in tradition and rules of procedure. The cost of work in process or finished product on a normal efficient operating schedule is basically sound, preventing various expense and labor factors due to excess and slack production from distorting inventory values. Concerning material inventories, it is an accepted accounting practice to record them at "cost or market, whichever is lower". It is my contention that they should be recorded at cost; the difference in market value should be disclosed as a valuation reserve and an element of cost of sales. The adoption of such a proposal would classify and record all current losses of an accounting period due to devaluation of material values to correspond with current market quotations. This in turn allows for separate valuation adjustments against individual inventory items when deemed advisable and essential.

The practice of computing costs based upon averages over several accounting periods or years presents to the management valuable statistics and data for establishing future selling prices. However, it is this writer's opinion that moving averages are more suitable for the purpose than weighted averages which must be reduced to a common base.

The author's clarifying remarks and suggested caution relating to cost comparisons and ratios of varying performances is appropriate. It shows a realization of the possible errors and illogical conclusions resulting from modification of fabricating processes and material costs. This axiom is frequently disregarded in transmitting reports to management for scrutiny.

Mr. Jarchow should be congratulated for his brilliant article which I consider excellent in its presentation and contents.

WALDO ROTHERT, JR.,
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Office Operation Standards

Editor, N. A. C. A. Bulletin:

There have been a few good articles on standards of operation within business offices, but altogether too few as compared with standards of operation in manufacturing plants.

This scarcity of written information on office standards probably stems from the fact that a good many of us look at an office job as a series of complex operations which cannot be converted to a specific routine. Looking at the office job as a whole, in the smaller size office this is entirely true. This does not mean, however, that the office job cannot be broken down into a series of steps and a standard established for each step. A good example of this is the job in an internal audit section of the company.

Normally, one would not expect to be able to establish a standard of operation for an internal auditor, and viewing the job as a whole it does seem quite difficult. There are a number of duties, however, which the internal auditor is required to do. For instance, bank reconciliations require a number of steps: sorting of checks, adding of checks, checking canceled checks to disbursement records, scanning endorsements, etc. A standard of operation may be established for each one of these steps, if necessary. An over-all standard, however, can be established which will be based on a certain number of checks per man-hour of operation. The question immediately will be raised as to the time required to check errors. It is quite true that the checking of one's own errors in handling a bank reconciliation takes as much or more time than the normal reconciliation would if there had been no errors made by the auditor. This extra time, however, is, in effect, a variation from the standard required to do the job. For practical purposes an allowance should be made for a normal amount of such errors on the part of the auditor, but if he does his own work accurately it should be unnecessary for him to duplicate his original work in order to balance his bank account.

There is an element of fixed time as well as a varying time element in arriving at a standard for the bank reconciliation job. It takes about as much time to get ready for the job and write down the opening balances, closing balances, etc., for a small bank account as it does for a large bank account. This should be taken into consideration in setting up such time standards.

What has been said above concerning the setting of standards for such jobs as a bank reconciliation can be said for a very large number of the other individual duties handled in the modern business office. If such standards are developed and used by the department heads, there is every reason to believe that office supervisors can do a much better job of controlling their operation than is ordinarily done in most business offices.

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COST CURRENTS

S. E. C. Amends Form 10-K and 1-MD—The Securities and Exchange Commission recently announced that it has amended Forms 10-K and 1-MD so as to secure a current restatement of the general character of the business in which registrants and their subsidiaries are engaged. The amendment adds the following paragraph to the instructions relating to Item 7 of both forms:

> In the annual report of the registrant filed for its fiscal year ending on or after December 31, 1945, there shall be included, in addition to the statement of changes, if any, a brief description of the general character of the business in which the registrant and its subsidiaries were engaged at the end of the fiscal year, or were about to engage if any change was then contemplated. Registrants which have already filed their annual report for such fiscal year shall furnish the information in the form of an amendment to the annual report within 90 days after the effective date of this instruction. Registrants which have not yet filed their annual report for such fiscal year may, if necessary, apply for a reasonable extension of time within which to furnish the information.

The above amendment is deemed necessary because of the major changes in many businesses as a consequence of war activities or occurring in the process of reconversion to peacetime activities. It is also believed that in many cases there have been changes which were not significant individually but whose cumulative effect over a period of years amounts to a substantial change.

The amendment is effective as of May 22, 1946.

Taxability of Profit on Repurchase of Company's Own Bonds—According to a recent decision of the United States Tax Court the taxability or nontaxability of income realized in the repurchase by a company of its own outstanding bonds depends on whether the purchase is made through brokers, or through direct negotiation with the bondholders. In Lewis F. Jacobson v. Commissioner (6 T. C. No. 133) it was held that "as to the bonds acquired by petitioner through direct negotiations with the bondholders he is not taxable on the gain therefrom" and "that petitioner is taxable on the gain realized in the purchases from bondholders through the secretary of the bondholders' committee and the security dealers."